

SHIROKOV, A.P., kand.tekhn.nauk; FUROCHKIN, A.A.

Introduction of roof bolting in the mines of the Kuznetsk Basin.

Biul.tekh.ekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform

17 no.11:24-26 N 164.

(MIRA 18:3)

KOVACHENKO, I.S., prof.; SHIROKOV, A.P., kand. tekhn. nauk

Perfect of manless coal mining technology. Bezop. truda v prom. 7
no.12:21-22 D '63. (MIRA 18:7)

SEMEVSKIY, Vladimir Nikolayevich, prof., doktor tekhn. nauk;
VOLENSKIY, Vladlen NIKHAYLOVICH, gornyy inzh.;
TIMOFEYEV, Oleg Vladimirovich, dots., kand. tekhn. nauk;
SHIROKOV, Anatoliy Pavlovich, kand. tekhn. nauk;
KRAVCHENKO, Grigoriy Ivanovich, kand. tekhn. nauk;
CHUKAN, Boris Karpovich, kand. tekhn. nauk; ETINGOV,
Semen Isayevich, gornyy inzh.; NESTERENKO, G.T., kand.
tekhn. nauk, retsenzent

[Red bolting] Shtangovaya krep'. Moskva, Nedra, 1965.
327 p. (MIRA 18:7)

1. Zaveduyushchiy kafedroy Leningradskogo gornogo instituta im. G.V.Plekhanova (for Semevskiy).
2. Leningradskiy gornyy institut im. G.V.Plekhanova (for Volzhskiy, Timofeyev).
3. Kaznetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Shiroko.).

VOL'KHAU, A.V., kandidat tekhnicheskikh nauk; SHIROKOV, A.P., gornyy inzhener

Testing anchorage supports in the Kuznetsk Basin. Ugol' 30
no.9:18-25 S'55. (MLRA 8:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut
(Kuznetsk Basin--Mine timbering)

CHURCHY, I.I., Sand Tech Sci--(disc) "Study of the ^{effect} ~~effect~~ of the rocks of an overhanging wall of steep strata in the Pro-
letarskiy-Kirovskiy ^{Part of the} ~~region of~~ Kuzbass /Method of strengthening the rocks
by anchoring." Mos, 1957. 16 pp; 1 sheet of tables (Main Administra-
tion of Sci Res and ^{Planning} ~~Project~~ Organizations under the Gosplan USSR.
All-Union Sci Res Coal Inst), 130 copies (HT, 22-50, 110)

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SHIRAKOV A P

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SINAYSKIY, V.P., inzh.; SHIROKOV, A.P., inzh.

Using anchor bolts in mines of the Kuznetsk Basin. Bezop.truda v
prom. 1 no.10:7-8 0 '57. (MIRA 10:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut.
(Kuznetsk Basin--Mine timbering)

ZAPREYEV, S., inzhener; SHIROKOV, A., inzhener.

Wooden anchored timbering. Mast. ugl. 6 no.7:8 JI '57. (MLBA 10:9)
(Mine timbering)

SHIROKOV, A.P., gornyy inzhener.

Petal rod supports in open pit coal mining. Gor.zhur. no.9:29-30
S '57. (MIRA 10:9)

(Mine timbering) (Strip mining)

YAKOVLEV, N.I.; SHIROKOV, A.P.; ZAPREYEV, S.I.

Industrial use of wooden anchor timbering. Ugol' 32 no.4:
37-38 Ap '57. (MLRA 10:5)

1. Shakhta "Tyrganskiye uklozy." (for Yakovlev) 2. Vostochnyy
uglekhimicheskiy institut. (for Shirokov).
(Kuznetsk Basin--Mine timbering)

SHIROKOV, A.P., gornyy inzh.

Determining the parameters of anchored timbering. Ugol' 32
no.9:23-27 S '57. (MIRA 10:10)

1. Vesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut.
(Mine timbering)

SHIROKOV, A.P., kand.tekhn.nauk; TOMASHEVSKIY, L.P., inzh.

Preventing endogenous fires in Kuznetsk Basin mines. Bezop.
truda v prom. 3 no.10:3-5 O '59. (MIRA 13:2)
(Kuznetsk Basin--Mine fires)

28(1)

SOV/118-59-4-24/25

AUTHORS: Shirokov, A.P. and Fayner, I.A., Engineers

TITLE: The Mechanized Installation of Tie Beam Supports

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1959,
Nr 4, pp 62-63 (USSR)

ABSTRACT: The article deals with American, Canadian and French
methods of mechanically installing beam supports in
mines. There are 3 photographs.

Card 1/1

TO: SHEVCHUK, L., Gen.; SHIMOKOV, A., Tech.

Useful invention. Cast. ugl. B no. 6:10 Ja '55.
(MIRA 12:10)
(Coal mines and mining--Equipment and supplies)

TOMASHEVSKIY, L., inzh.; SHIROKOV, A., inzh.

Silting stoped out areas. mast. ugl. 8 no. 6:10 Ja '59.
(mine filling) (MIRA 12:10)

SHIROKOV, A.P., kand.tekhn.nauk

Using bars in lining tunnels. Transp.stroi. 9 no. 94-55
8 '59. (MIRA 13:2)

(Tunneling)

Shirokov, A.P.

Anchor bolting of tunnels and mines. Put' i put.khoz. no.12:14-15
D '59. (MIRA 13:4)

1. Nachal'nik laboratorii Kuznetskogo nauchno-issledovatel'skogo
ugol'nogo instituta, g.Prokop'evsk.
(Mine timbering) (Tunnels)

YAKOVLEV, N.I.; SHIROKOV, A.P., kand.tekhn.nauk; ZAPREYEV, S.I.

Using rod supports for auxiliary purposes. Ugol' 34 no.4:24-25
Ap '59. (MIRA 12:7)

1. Nachal'nik shakhty "Tyrganskiye uklony" Kuzbassa (for Yakovlev).
2. Nachal'nik laboratorii Kuznetskogo nauchno-issledovatel'skogo
ugol'nogo instituta (for Zapreyev).
(Coal mines and mining--Equipment and supplies)
(Mine roof bolting)

SHIROKOV, A., kand. tekhn. nauk; MAKSIMENKO, F.; SAMETS, M.; GAVRILENKO, A.

Mining steep coal seams without stope timbering in Kuznetsk Basin
mines. Ugol' 34 no.8:55-59 Ag '59. (MIRA 12:12)

1.Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Shi-
rokov, Samets). 2.Glavnyy inzhener shakhty "Krasnyy Uglekop", Kuzbass
(for Maksimenko). 3.Zamestitel' glavnogo inzhenera shakhty "Krasnyy
Uglekop," Kuzbass (for Gavrilenko).
(Mining engineering)

KOVACHEVICH, P.M.; POYDA, A.G.; SHIROKOV, A.P.; FAYNER, I.A.; BALIBALOV, I.,
red.; RUDINA, G., tekhn. red.

[Rod bolting in the coal industry] Ankernaia krep' v ugol'noi pro-
myshlennosti. Kemerovo, Kemerovskoe knizhnoe izd-vo, 1960. 185 p.
(MIRA 14:7)

(Mine timbering)

KOROVIN, T.D.; TOMASHEVSKIY, L.P., inzh.; SHIROKOV, A.P., inzh.

Eliminate causes for accidents in mining steep beds in the
Kuznetsk Basin. Bezop.truda v prom. 4 no.10:3-5 0 '60.

(MIRA 13:11)

1. Glavnyy inzhener tresta Stalinugol' (for Korovin). 2. Shakhta
No.3-3bis, Kuznetskiy ugol'nyy basseyn (for Tomashevskiy).
3. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut (for
Shirokov).

(Kuznetsk Basin—Coal mines and mining--Safety measures)

SHIROKOV, A.P., kand.tekhn.nauk; TOMASHEVSKIY, L.P., gornyy inzh.

Using anchor bolting for various auxiliary purposes. Ugol' Ukr. 4
no.10:31-32 O '60. (MIRA 13:10)

(Coal mines and mining—Equipment and supplies)

SHIROKOV, A., kand.tekhn.nauk, SAMETS, M., inzh.

Mechanized working of steep beds in stopes. Bezop.truda v prom. 4
no.11:8-9 N '60. (MIRA 13:11)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Kuznetsk Basin--Coal mines and mining)

SHIROKOV, Anatoliy Pavlovich; SAMETS, Mikhail Grigor'yevich; ZHUKOV, V.V.,
otv. red.; SMIRENSKIY, M.M., red. izd-va; IL'INSKAYA, G.M., tekhn.
red.

[Working coal seams without bracing up the area near the cut] Raz-
rabotka ugol'nykh plastov bez krepleniia prizaboynogo prostranstva.
Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961.
169 p. (MIRA 14:9)

(Coal mines and mining)

S. I. Kuvshinov, A.P., kand. tekhn. nauk

Mechanized roll forming of metal. Sov. zhur. n. 6:77-79 Ja '60.

(MIRA 14:2)

1. Magnetostrictive machine-is in the Bel'skiy ugol'nyy institut, "Prakticheskoe".

(Name not holding)

KOROVIN, T.D.; SHIROKOV, A.P., kand.tekhn.nauk; TOMASHEVSKIY, L.P., gornyy inzhener

Characteristics of stope ventilation in mining steep seams by the longwall on the strike method. Ugol' 35 no.9:24-26 S '60.

(MIRA 13:10)

1. Glavnyy inzh.tresta Stalinugol' (for Korovin). 2. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Shirokov).
3. Shakhta No.3-3-bis Prokop'yevsko-Kiselevskogo rayona Kuznetskogo basseyna (for Tomashevskiy).

(Mine ventilation)

SHIROKOV, A. P., kand. tekhn. nauk

Means of mechanization in anchor bolting. Ugol' Ukr. 4 no. 12:40-41
D '60. (MIRA 13:12)

(Mine roof bolting--Equipment and supplies)

SHIROKOV, A.P., kand.tekhn.nauk

Mechanization of rod bolting work. Gor. zhur. no.4:39-41 Ap
'61. (MIRA 14:4)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut, Prokop'-
yevsk.

(Mine roof bolting--Equipment and supplies)

KOKCRIN, P.I., prof.; SHIROKOV, A.P., kand.tekhn.nauk; KOROVIN, T.D., inzh.

Mining coal in steeply pitching seams without men in the
stope. Izv. vys. ucheb. zav.; gor. zhur. no.8:15-21 '61.

(MIRA 15:5)

1. Kemerovskiy gornyy institut. Rekomendovana kafedroy
razrabotki mestorozhdeniy poleznykh iskopayemykh. Kemerovskogo
gornogo instituta.

(Kuznetsk Basin--Coal mines and mining)

SHIROKOV, A.P., kand.tekhn.nauk

Mining coal without men in the stope. Sbor. KuzNIUI no.9:4-19
'61. (MIRA 16:5)
(Kuznetsk Basin--Coal mines and mining) (Automation)

SHIROKOV, A.P., kand.tokhn.nauk

Chain saws for coal drawing. Biul.tekh.-ekon.inform. no.10:15-16
'61. (MIRA 14:10)

(Coal mining machinery)

SHIROKOV, A.P., kand.tekhn.nauk

Working steep layers without supporting the working face. Izv.
vys. ucheb. zav.; gor. zhur. no.11:18-23 '61. (MIRA 15:1)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Kuznetsk Basin--Coal mines and mining)

SHIROKOV, A.P., kand.tekhn.nauk; KOROVIN, T.D., inzh.

Methane and dust explosions in mines should be prevented. Bezop.
truda v prom. 5 no. 5:1-3 My '61. (MIRA 14:5)
(Mine explosions)

SHIROKOV, A., kand.tekhn.nauk

Extraction of coal without men in the Kuznetsk Basin.
Sov.shakht. 10 no.3:19-21 Mr '61. (MIRA 14:7)

1. Nachal'nik gornogo otdela Kuznetskogo nauchno-issledovatel'skogo
ugol'nogo instituta.
(Kuznetsk Basin--Coal mines and mining)
(Automation)

SHIROKOV, A.P., kand.tekhn.nauk; KUZ'MIN, G.P., inzh.; KOSTYREV,
A.P., inzh.

Using chain saws in mechanical coal mining. Mekh.i avtom.
proizv. 15 no.8:37-38 Ag '61. (MIRA 14:9)
(Coal mining machinery)

SHIROKOV, A.P., kand.tekhn.nauk

Mining of steeply dipping seams in Kuznetsk Basin mines without the presence of miners. Ugol' 36 no.5:23-26 My '61. (MIRA 14:5)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Kuznetsk Basin--Coal mines and mining--Equipment and supplies)
(Blasting)

SHIROKOV, A.P., kand.tekhn.nauk

Automatic drive for mining coal without men. Izv. vys. ucheb.
zav.; gor. zhur. 5 no.1:138-143 '62. (MIRA 15:4)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.
Rekomendovana Kuznetskim nauchno-issledovatel'skim ugol'nyim
institutom.
(Coal mining machinery—Electric driving) (Automatic control)

SHIROKOV, A.P., kand.tekhn.nauk; KUZ'MIN, G.P., inzh.

Using rod bolting for securing machinery in mines. Shakht.
stroil. 6 no.1:24-25 Ja '62. (MIRA 14:12)

1. Kuznetskiy nauchno-issledovatel'skiy 'gol'nyy institut
(for Shirokov). 2. Trest Kiselevskugol' (for Kuz'min).
(Coal mining machinery)

SHIROKOV, A.P., kand.tekhn.nauk

Use of wooden rod bolting in the Kuznetsk Basin. Shakht.
stroil. 6 no.7:23-24 JI '62. (MIRA 15:7)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Kuznetsk Basin--Mine roof bolting)

KOTAKHCV, V.; KUZ'MIN, G.; SHIROKCV, A.

New use of rod bolting. Sov. Shakht. 11 no.3:19 Mr '62,
(MIRA 15:5)
(Kuznetsk Basin--Coal mining machinery) (Mine roof bolting)

SHIROKOV, A.P., kand.tekhn.nauk

"Research on methods of unmanned coal mining in foreign countries."
by I.A.Babokin, G.G.Suetin. Reviewed by A.P.Skirokov. Ugol'
37 no.11:61-62 N '62. (MIRA 15:10)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Mining research) (Babokin, I.A.) (Suetin, G.G.)

SEINOV, A.P., kand.tekhn.nauk

Shattering of coal in mining using borehole charges in
Kuznetsk Basin mines. Vzryv. delo no.50/7:176-184
'62.

(MIRA 15:9)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Kuznetsk Basin—Coal mines and mining)
(Blasting)

KOVACHEVICH, Petr Markovich; FAYNER, Il'ya Abramovich; SHIROKOV,
Anatoliy Pavlovich; BALIBALOV, I., red.; GERASEVICH, Z.,
tekhn. red.

[Handbook for the young miner] Spravochnik molodogo shakh-
tera. Kemerovo, Kemerovskoe knizhnoe izd-vo, 1962. 365 p.
(MIRA 16:10)

(Coal mines and mining)

SHIROKOV, Anatoliy Pavlovich; SUMIN, Ivan Petrovich; KUZ'MIN,
Gennadiy Petrovich; MINDELI, E.O., doktor tekhn. nauk,
retsenzent; DZHIMSHELEYSHVILI, Sh.P., otv. red.;
SMIRENSKIY, M.M., red.izd-va; LOMILINA, L.N., tekhn.red.

[Manless extraction of coal in Kuznetsk Basin mines] Pri-
menenie bezliudnoi vyemki uglia na shakhtakh Kuzbassa.
Moskva, Gosgortekhzdat, 1963. 174 p. (MIRA 17:1)

SHIROKOV, A.P., kand.tekhn.nauk; KOSTAREV, A.P., inzh.; KOTYAKHOV, V.I.,
inzh.

Use of coal saws in Kuznetsk Basin mines. Bezop.truda v prom.
7 no.3:71-72 Mr '63. (MIRA 16:3)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut (for
Shirokov). 2. Kombinat ugol'nykh predpriyatiy Kuznetskogo
kamennougol'nogo basseyna (for Kostarev). 3. Shakhta im.
Vakhrusheva, Kuzbass (for Kotyakhov).
(Kuznetsk Basin--Coal mining machinery)

SHIROKOV, A.P., kand. tekhn. nauk

Using rods for various purposes in the Kuznetsk Basin. Shakht.
stroil. 7 no.11:28 N°63 (MIRA 17:7)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.

SHIROKOV, A.P., kand. tekhn. nauk; SUMIN, I.P., inzh.

Recent developments in blasting in Kuznetsk Basin mines. Vzryv.
delo no.51/8:346-360 '63. (MIRA 16:6)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut
(for Shirokov). 2. Proizvodstvenno-eksperimental'noye upravleniye
vzryvnykh rabot kombinata Kuzbassugol' (for Sumin).
(Kuznetsk Basin—Coal mines and mining)
(Blasting) (Boring)

KOPI, V.I., IAPTEV, B.I.; SHIROKOV, A.I.; SHULIKOVSKIY, V.I.

Aleksandr Petrovich Norden, 1904, on his 60th birthday. Esp.
mat. nauk 19 no.5:171-179 S-O '64.

SHIROKOV, A.P., kand. tekhn. nauk, KUZ'MIN, G.P.; STEPANOV, Ye.A.;
LIDER, V.A.

Industrial testing of the automatic drive of a coal saw.
Ugol' 40 no.1:46-48 Ja '65. (MIRA 18:4)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut
(for Shirokov, Stepanov, Lider). 2. Trest Kiselevskugol'
(for Kuz'min).

DMITRIYEV, S.I.; SHIROKOV, A.P.

Mining thick, steeply pitching seams at the Kuznetsk Basin
mines. Fiz.-tekh. probl. razrab. pol. iskop. no.4:85-92 '65.
(MIRA 19:1)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut,
Prokop'yevsk. Submitted Jan. 21, 1965.

KONOPLYANTSEV, A.A., redaktor; KRASULIN, V.S., redaktor; SHIROKOV, A.S.,
redaktor; KOLOSKOVA, M.I., redaktor izdatel'stva; GUROVA, O.A.,
tekhnicheskiy redaktor

[Experience in using geophysical methods of prospecting in hydro-
geological, engineering and geological research] Opyt primeneniya
geofizicheskikh metodov razvedki i gidrogeologicheskikh i inzhenerno-
geologicheskikh issledovaniyakh. Pod red. A.A.Konopliantseva, V.S.
Krasulina i A.S.Shirokova. Moskva, Gos. nauchno-tekhn. izd-vo lit-
ry po geol. i okhrane neдр, 1955. 74 p. (MLRA 98)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany neдр.
Tekhnicheskiy sovet.
(Prospecting--Geophysical methods)

SOV-132-58-9-14/18

AUTHORS: Shirokov, A.S.; Kupalov Yaropolk, I.K., and Komarov, I.S.

TITLE: The XXII Congress of the German Geophysical Society (XXII S"yezd Germanskogo geofizicheskogo obshchestva)

PERIODICAL: Razvedka i okhrana nedr, 1958, Nr 9, pp 52-54 (USSR)

ABSTRACT: The above mentioned conference took place in Leipzig in May 1958. The authors, who represented the USSR, give a report on the activities of the conference.

ASSOCIATIONS: 1) Ministerstvo geologii i okhrany nedr SSSR (Ministry of Geology and Conservation of Mineral Resources of the USSR)
2) Gosplan SSSR (Gosplan of the USSR)
3) VNII-geofizika (VNII - Geophysics).

1. Geophysics--Germany

Card 1/1

BOV/132-59-3-15/15

AUTHORS: Shirokov, A.S., and Bozdanov, A.Sh.

TITLE: Chronicle. Aerial Electromagnetic Prospecting in the USSR.

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 3, pp 62-64, (USSR)

ABSTRACT: The article describes three different methods of electromagnetic prospecting - the method of registering the resistance emitted from an aircraft aerial, the induction method, and the b.d.k.-method which constitutes the article's main topic. It is done by the aerial recording of an electromagnetic field created by a grounded cable, the b.d.k. (for beskonechno dlinnyy kabel' - endless cable). In 1955, the Ministry of Geology and Mineral Resources Conservation of the USSR) having realized the high importance of the aerial electromagnetic prospecting, ordered the development of this method by establishing the Mezhdudedomstvennaya komissiya po aerolektrorazvedke (Inter-Departmental Committee for Aerial Electromagnetic Prospecting). The latter was composed of representatives of the following organizations: Ministry of Geology and Mineral Resources Conservation of the USSR, Vsesoyuznyy

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SOV/132-59-3-15/15

Chronicle. Aerial Electromagnetic Prospecting in the USSR

nauchno-issledovatel'skiy institut metodiki i tekhniki razvedki /VITR/ (All-Union Research Institute of New Methods and Techniques in Prospecting), Institut mashinovedeniya i avtomatiki Akademii nauk Ukrainsskoy SSR /INA/ (Institute of Mechanical Engineering and Automation of the AS Ukrainian SSR), Institut fiziki zemli Akademii nauk SSSR /IFZ/ (Institute of the Physics of the Earth of the AS USSR), and Moskovskiy geologorazvedochnyy institut (Moscow Geological and Prospecting Institute). As Scientific head of this committee was appointed Corresponding Member of the AS USSR A.M. Tikhonov. The following scientists took part in the development of the b.d.k.-method: Corresponding Member of the AS USSR M.P. Karaslyayev (INA AS USSR), L.G. Vityuk (INA AS USSR), N.M. Shuvai-Bergeyev (VITR), Corresponding Member of the AS USSR A.M. Tikhonov (IFZ AS USSR), and V.I. Dmitriyev (IFZ AS USSR). During 1959, several industrial areas of the Northern Urals, the Magadan, Dzherkazzan, and the Kola peninsula will be subject to prospecting and mapping by the new method. The b.d.k.-equipment consists of the

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SOV/132-59-3-15/15

Chronicle. Aerial Electromagnetic Prospecting in the USSR

ground and aerial apparatus. The ground apparatus has a vacuum tube generator which generates A.C. of up to 2 kw at 81, 141, 271, and 540 cycles and feeds it into the grounded cable. The latter is some 15 km in length and enables the prospecting of an area as large as 300-350 sq km. In addition to this, the following units belong to the ground apparatus: an ultrashort wave transmitter to transmit reference signals, a radio station for the command communication, a current-registering device, several rectifiers, and a field power station of the ZhES-9-type. The aerial apparatus mounted on a MI-4-type helicopter consists of a measuring device, an RSU-3M-type radio station, and a power unit with a FO-500-type transformer. The prospecting is carried out at a flying speed of 60 to 120 km/hr and at an altitude of 50 to 200 m. The scale range varies from 1 : 10,000 to 1 : 50,000. A helicopter flying under favorable conditions can map a prospecting area as large as 300 sq km within 2 to 3 weeks provided its flying speed is 90 km/hr, the cable is laid once, and the scale of 1 : 25,000

Card 3/4

3(

SOV/132-59-8-7/18

AUTHORS: Shirokov, A.S., and Zhuravlev, V.V.

TITLE: Basic Problems of Perfecting and Developing Geophysical Equipment

PERIODICAL: Razvedka i okhrana nedr, 1959. Nr 8. pp 27-32 (USSR)

ABSTRACT: The author states the urgent necessity to modernize present, and to create new, geophysical equipment. Although this equipment was greatly developed since the last war, it is already obsolete and new devices and aggregates must be created. At present, different scientific research institutes and organizations are developing new equipment much too slowly, and plants are also lagging in its production. Measures have now been taken to increase the production of this equipment 2.4 times by 1965 over 1959. The author reviews the new equipment to be created in the next years.

Card 1/8

I-Seismographic exploration.
The obsolete 26-channel seismic stations of SS-26-51D

SOV/132-59-8-7/18

Basic Problems of Perfecting and Developing Geophysical Equipment

type will be replaced by more economical and highly-productive 60-channel stations of SS-30/60 type and the portable SS-24P stations. These stations now being produced at the "Neftepribor" Plant. The old stations will all be replaced in the next 2 years. A special attachment of the PPMZ-2 is also being produced for the magnetic recording of oscillations for 25 channels. The "Neftepribor" Plant is also producing an autonomic seismic station with an intermediate magnetic recording device of SSM-57 type. Equipment for a regulated directed receiving (RNP) of seismic oscillations developed by the Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. Gubkina (the Moscow Institute of the Petrochemical and Gas Industry imeni Gubkin) is now being delivered to industry. New universal seismic stations with photographic recording are now being introduced into industry. Apart from the production of SPM-16 and SPED-56 seismographic receivers

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now being produced, new low-frequency receivers of SPEN-1 type with 10 c frequency, and of NS-3 type with 3 c frequency will be produced in 1960. The VNIIGeofizika has developed a seismic station of MSS-58 type with a floating piezo-aggregate, which will permit seismographic exploratory research at sea. The new exploding device SVM-1, of condenser type, will be produced in 1960.

II. Gravimetric exploration.

The SN-3 and GAK-3M gravimeters will be replaced by gravimeters of GAK-4M type with an average precision of 0.2 milligals. More precise gravimeters will be produced later. A new gravimeter-altimeter of GVP-1 type, which can determine the gravity force along with the altitude of observation points, will also be produced in 1960. The Zavod "Geologorazvedka" ("Geologorazvedka" Plant) renewed the production of gravitational variometers of the VG-1 type and of gravitational gradientometers of

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GRBM-2 type.

III. Magnetic exploration.

The Institut zemnogo magnetizma AN SSSR (the Institute of Terrestrial Magnetism of the AS USSR), and the OKB, constructed a new quartz magnetometer M-14 with the magnetic element suspended on quartz threads. It will replace the obsolete M-2 magnetometer. VITR developed models of a magnetometer working on the principle of nuclear resonance. At a precision of 1 or 2 gamma, the device needs no orientation, and its indications do not depend on the temperature. These magnetometers will be produced in 1960. The OKB of the Ministry of Geology and Conservation of Mineral Resources of the USSR is preparing designs of a factory model of a portable magnetometer with a magnetic modulation counter and an electronic scheme on semi-conductors (M-17) based on the calculations of the Institut mashinovedeniya i avtomatiki AN Ukrainskoy SSR (Institute of Mechanical

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Engineering and Automation of the AS Ukrainskaya SSR). To improve the accuracy of measurements of the ASGM-25 aerogeophysical station, its AEM-49 magnetometer was modernized, and a new ASG-45 magnetometer will soon be produced by the "Geologo-razvedka" Plant. Construction design of a new T-aeromagnetometer AM-13 of high precision along with a magnetomodulating indicator is nearing completion. The Barnaul'skiy zavod geofizicheskoy apparatury (Barnaul Plant of Geophysical Equipment) is preparing the production of a field device called the "pronismeter Kalashnikova" (Kalashnikov Device for Measuring Penetrability) to determine the degree of magnetic penetrability of samples of rocks, based on an electrical scheme on semi-conducting triodes.

IV. Electrical Exploration.

The electro-exploring stations ERS-23, ERS-16.5 and the station of telluric currents EPL-57, and the potentiometer EP-1, presently produced at plants

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of the Moskovskiy oblastnoy sovnarkhoz are obsolete, and the "Geologorazvedka" Plant is preparing the production of new electronic devices (electronic switch compensator ESK-1, computing compensator KSRM-I, and the electronic EAK-1 autocompensator) developed by the Institute of Mechanical Engineering and Automation of the AS Ukrainskaya SSR. The Barnaul Plant of Geophysical Equipment is producing devices working on the method of correlation of gradients of the electrical potential of the "IZh" type ("Iskatel' zhil"- "Vein Prospector") for prospecting for vein ore bodies. For electrical exploration on alternating current, special equipment based on the induction method is now being developed (the amplitude-phase measuring equipment AFI-1 and the ANP-1 type with ungrounded loop). The VNIIGeofizika, the Institute of Terrestrial Magnetism of the AS USSR, and the OKE of the Ministry are developing equipment for magnetic-telluring shaping.

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V. Electrical Core-Sampling.

The Petroleum industry at present is using the AKS-L/51 and OKS-56 core sampling stations working with one- and three-core armored cable. Semi-automatic PKS-400 and PKS-750 stations are used mainly in smaller coal, ore and hydrogeological bore holes. Automatic AKS/L-51 AEKS-900 stations are now being introduced. A large number of devices for bore-holes of various diameter and temperature are being produced. Special miniature devices for radio-active core-sampling (the RARK device and others) are also being produced. The Tashkentskiy kabel'nyy zavod (Tashkent Cable Plant) mastered the production of cables for electrical core-sampling (one- three- and multi-core armored cables, temperature resisting). The production of cable does not meet the needs of industry, and

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SOV/132-59-8-7/18

Basic Problems of Perfecting and Developing Geophysical Equipment
hampers the development of geophysical operations.

ASSOCIATION: Ministerstvo geologii i okhrany nedr SSSR
(Ministry of Geology and Conservation of Mineral
Resources)

Card 8/8

SHIROKOV, A.S.

Results of the Scientific and Technical Geophysical Conference.
Razved. i okh. nedr 25 no.12:54-59 D '59. (MIRA 13:6)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Prospecting--Geophysical methods)

FEDYNSKIY, V.V., doktor fiziko-matem. nauk, red.; SHIROKOV, A.S., red.; KO-
VALEVA, A.A., red.; GRATSIAKOVA, O.P., nauchn. red.; BORISOV, A.A.,
nauchn. red.; FEDYUK, V.I., nauchn. red.; KOTLYAREVSKIY, B.V.,
nauchn. red.; POMERANTSEVA, I.V., nauchn. red.; MOZZHENKO, A.N.,
nauchn. red.; LOZINSKAYA, A.M., nauchn. red.; SHNEYERSON, M.B.,
nauchn. red.; BOGDANOV, A.Sh., nauchn. red.; MIKITSKIY, V.Ye., nauchn.
red.; KUDYMOV, B.Ya., nauchn. red.; PETROV, L.V., nauchn. red.; KOMA-
ROV, S.G., nauchn. red.; GORBUNOV, G.V., nauchn. red.; DUNCHENKO, I.A.,
nauchn. red.; FEL'DMAN, I.I., nauchn. red.; POMETUN, D.Ye., nauchn.
red.; BEKMAN, Yu.K., ved. red.; VORONOVA, V.V., tekhn. red.

[Status and prospects for developing geophysical methods for mineral
prospecting] Sostoianie i perspektivy razvitiia geofizicheskikh meto-
dov poiskov i razvedki poleznykh iskopaemykh; materialy. Pod red. V.V.
Fedynskogo. Moskva, Gos. nauchno-tekhn. izd-vo nef. i gorno-toplivnoi
lit-ry, 1961. 623 p. (MIRA 14:11)

1. Nauchno-tekhnicheskaya geofizicheskaya konferentsiya, Moscow, 1959.
2. Ministerstvo geologii i okhrany nedr SSSR (for Fedynskiy, Petrov).
(Prospecting—Geophysical methods)

BOGDANOV, A.Sh.; SHIROKOV, A.S.

Development of aerial electric surveying in the U.S.S.R.
Razved. i okh. nedr 27 no.5:61-63 My '61. (MIRA 14:9)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Aeronautics in surveying)

SHIROKOV, A.S.

Geophysical mineral prospecting methods. Razved. i okh. nedr 27
no.4:27-34 Ap '61. (MIRA 14:5)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Prospecting—Geophysical methods)

SHIROKOV, A.S.

Practice of using aerial explosions in seismic prospecting in
the German Democratic Republic. Geofiz. razved. no. 8:25-33
'62. (MIRA 15:7)

(Germany, East—Seismic prospecting)
(Explosions)

SHIROKOV, A.S.; YEVTEYEV, M.G.

In the session of the Council of Geological Testimony on the
geophysics in mining. Sov.geol. 5 no.3:163-164 Mr '62.
(MIRA 15:4)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Mining geology) (Prospecting—Geophysical methods)

BORISOV, A.A.; BLOKHIN, P.A.; SHIROKOV, A.S.; SHNEYERSON, M.B.

Methods for the combined geophysical study of oil- and gas-bearing structures in platform provinces. Sov.geol. 5 no.11:15-35
N '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut
geofizicheskikh metodov razvedki.
(Prospecting—Geophysical methods)

SHIROKOV, A.S.

Present state of geophysical methods used in prospecting and
exploiting deposits of hard minerals. Uch. zap. SAIGIMSa
no.8:5-14 '62. (MIRA 17:1)

1. Ministerstvo geologii i okhrany neдр SSSR.

SHIROKOV, A.S.

Results of the fifth All-Union Scientific and Technical Geophysical Conference. Razved. i okh. nedr 30 no.2:63-64, P '64.
(MIRA 17:8)

1. Gosudarstvennyy geologicheskiy komitet SSSR.

SEROV, N.V.; SHIROKOV, A.V., veterinarnyy vrach

How we prevented the spreading of foot-and-mouth disease.
Veterinariia 40 no.3:26 Mr '63. (MIRA 17:1)

1. Veterinarnyy otdel Kostromskogo oblastnogo upravleniya proizvodstva i zagotovok sel'skokhozyaystvennykh produktov.
2. Nachal'nik veterinarnogo otdela Kostromskogo oblastnogo upravleniya proizvodstva i zagotovok sel'skokhozyaystvennykh produktov (for Serov).

CHARLIN, A.I., inzh.; SHIROKOV, A.V.

Semi-automatic machine for joining the primer with the fuse. Bezop.
truda v prom. 4 no.6:34-35 Je '60. (MIRA 14:3)
(Blasting—Equipment and supplies)

KYZHOV, N.S.; SHIROKOV, A.V.

Gas cyanidation of gears made of 18KhGT and 30 KhGT steels. Stroil.
i dor.mash. 7 no.2:36-37 F '62. (MIRA 15:5)
(Gearing) (Case hardening)

ACC NR: AP7004909

(N)

SOURCE CODE: UR/0109/66/011/012/2248/2248

AUTHOR: Krynetskiy, B. B.; Kuz'min, G. P.; Shirokov, A. V.

ORG: none

TITLE: Cooled circulator for 3 cm wavelength

SOURCE: Radiotekhnika i elektronika, v. 11, no. 12, 1966, 2248-2248

TOPIC TAGS: microwave component, ferrite

ABSTRACT:

A Y-type circulator which operates with a quantum paramagnetic amplifier of 3 cm wave range is described. A garnet-structured calcium-vanadium ferrite was used as the active material. The ferrite has the following characteristics: the width of the ferromagnetic resonance line at temperatures of 300, 77, and 4.2K are 150, 280, and 340 gauss, respectively. A disk-shaped ferrite 8.25 mm in diameter inserted into a teflon washer with an outside diameter of 20 mm was installed at the center of the circulator. Operation of the circulator is satisfactory at temperatures ranging from 300 to 4.2K. At the temperature of liquid helium, maximum decoupling was 46 db, and direct losses amounted to approximately 0.8db. The bandwidth of the circulator at 20-db decoupling was 170 me. Orig. art. has: 1 figure. [GS]

SUB CODE: 09/ SUBM DATE: 23May66/ ORIG REF: 001/ OTH REF: 001/ ATD PRESS: 5115
Card 1/1 UDC: 621.375

KOMLEV, G.A.; LEVKOVSKIY, O.V.; SHIROKOV, A.V.

Reduction of liquid oxidized copper by natural gas. TSvet. met.
37 no.9:13-14 S '64. (MIRA 18:7)

KOMLEV, G.V.; KENFUKHIN, A.V.; K. I. SOV. S. A.; SHAROV, A.V.

Use of reducers in the desulfurization of a gas stream by the
products of incomplete combustion of natural gas. Izv. Akad.
Nauk SSSR. Ser. tekhn. nauk no. 2: 92-97, 1985. 1985. 1985.

1. Specialized abstract.

ACC NR: AP7004909

(N)

SOURCE CODE: UR/0109/66/011/012/2248/2248

AUTHOR: Krynetskiy, B. B.; Kuz'min, G. P.; Shirokov, A. V.

ORG: none

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ABSTRACT:

A Y-type circulator which operates with a quantum paramagnetic amplifier of 3 cm wave range is described. A garnet-structured calcium-vanadium ferrite was used as the active material. The ferrite has the following characteristics: the width of the ferromagnetic resonance line at temperatures of 300, 77, and 4.2K are 150, 280, and 340 gauss, respectively. A disk-shaped ferrite 8.25 mm in diameter inserted into a teflon washer with an outside diameter of 20 mm was installed at the center of the circulator. Operation of the circulator is satisfactory at temperatures ranging from 300 to 4.2K. At the temperature of liquid helium, maximum decoupling was 46 db, and direct losses amounted to approximately 0.8db. The bandwidth of the circulator at 20-db decoupling was 170 me. Orig. art. has: 1 figure.

[GS]

SUB CODE: 09/ SUBM DATE: 23May66/ ORIG REF: 001/ OTH REF: 001/ ATD PRESS: 5115
Card 1/1 UDC: 621.375

LAWS OF DISTRIBUTION OF THE COAL LAYERS IN THE DONETS
GEOSYNCLINAL DEPOSITS. A. Z. SHIROKIN. *Soviet Geol.* 8,
No. 6, 16-27 (1938).— The conditions of deposition and
degree of metamorphism are discussed. F. H. R.

AND SLA. METACOLOGICAL LITERATURE CLASSIFICATION

PROCESS AND PROPERTIES INDEX									
<div style="position: relative; height: 100%;"> <div style="position: absolute; top: 10px; left: 10px; font-size: 2em;">66</div> <div style="position: absolute; top: 10px; right: 10px; font-size: 2em;">28</div> <div style="position: absolute; top: 25%; left: 30%; text-align: center;"> <p>Distribution laws for the deposits of the Donetsk syncline. A. Z. Shirokov. <i>Soviet Geol.</i> 1940, No. 7, 63-76. — Data on gas and oil deposits. P. H. Rathmann</p> </div> </div>									
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION									
ASB DIVISION					SLA DIVISION				
ASB SUBDIVISION					SLA SUBDIVISION				
ASB CODE					SLA CODE				
ASB CODE					SLA CODE				

SHIROKOV, A.Z.

Coal measures in geosynclines and platforms. Trudy Inst.geol.
nauk. no.90:88-102 '47. (MIRA 9:11)
(Coal geology)

SHIROKOV, A. Z.

"Relief and Structure of the Pre-Cambrian Base of the Russian Platform," Priroda, No. 4, 1948; "Reply to A. I. Kravtsov and V. V. Vladimirov on the Methane Content of the Coal Strata of the Donets Carboniferous," Ugol', No. 5, 1949.

SHIROKOV, A. Z.

Shirokov, A. Z. - "Causes of the waterlogging of coal in the Donetz Basin," Izvestiya
Dnepropetrovsk. gosnauko in-ta, Vol. XIX, 1967, p. 5-20 - Bibliog: 15 items

SO: U-3600, 10 July 58, (Letopis 'Zhurnal 'nykh Statey, No.6, 1969).

SHIROKOV, A.Z.

NESTERENKO, P.G.; SHIROKOV, A.Z.; TSIRINA, T.S.

Spore and pollen analysis of lignites of the Dnieper basin. Biul.
MOIP. Otd.geol. 29 no.6:81-92 N-D '54. (MLBA 8:2)
(Dnieper Valley--Pollen, Fossil)(Dnieper Valley--Spores (Bo-
tany), Fossil) (Dnieper Valley--Lignite)

Shirokov, A. Z.

USSR/Geology - Geochemistry

Card 1/1 Pub. 22 - 29/45

Authors : Shirokov, A. Z.

Title : Laws governing the distribution of sulfurous compounds among Donbas coal

Periodical : Dok. AN SSSR 103/2, 281-282, Jul 11, 1955

Abstract : Quantitative rules were established governing the spatial distribution of sulfur containing compounds among the coal deposits of DONBAS. Three USSR references: (1940-1948). Table; diagrams.

Institution : Dnepropetrovsk Mining Inst. im. Artema

Presented by: Academician N. M. Strakhov, May 19, 1955

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 8,
p 178 (USSR) 15-57-8-11358

AUTHOR: Shirokov, A. Z.

TITLE: The Lower Carboniferous of the Northwestern Continuation of the Donbass and its Coal Potential (Nizhniy karbon severo-zapadnogo prodolzheniya Donbassa i yego ugle-nosnost')

PERIODICAL: Tr. Labor. geol. uglya AN SSSR, 1956, Nr 6, pp 319-326

ABSTRACT: Coal deposits are traced in the structural fissures to the northwest, northeast, and southeast from the folded Donbass. The lower Carboniferous of the northwestern continuation of the Donbass has coal deposits; Tournaisian, Visean, and Namurian formations are distinguished here. The Tournaisian and Visean are divided into three series: C¹₁ (A), C²₂ (B), and C³₁ (C). The Namurian is divided in series C⁴₁ and C⁵₁.

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The Lower Carboniferous of the Northwestern Continuation (Cont.) 15-57-8-11358

From three to 17 seams of coal of workable thickness are associated with the upper part of the Visean (C₁^{Vgb}). The total number of coal seams is as high as 70. The number of workable seams decreases westward from the meridian of Novomoskovsk and eastward from Mezheva. The coal of the lower Carboniferous is similar to the durain-type, with a considerable amount of fusain and a large number (20 to 35 percent) of macrospores. In the eastern areas, the coal is of D quality and may be used for coking; in the western areas, it is of E quality and may be used for semi-coking and as a power-producing fuel. Westward of the Petrikov and Tsarichanskiy rayony (districts), the degree of metamorphism of the coal decreases.

S. Ye. Berboloz

SHIROKOV, A.Z.; ALYMOV, D.F.

Boulder-pebble deposits of the southern border of the Dnieper-
Donets Depression. Dokl. AN SSSR 111 no.3:685-686 W '56. (MLRA 10:2)

1. Dnepropetrovskiy gornyy institut. Predstavleno akademikom
N.M. Strakhovym.
(Novo-Moskovsk--Pebbles)

SHIROKOV, Aleksandr Zosimovich; SLAVOROSOV, A.Kh., otvetstvennyy red.;
CHANTSEVA, G.M., tekhn.red.

[The Great Donets Basin] Bol'shoi Donbass. Moskva, Ugletekh-
izdat, 1957. 89 p. (MIRA 11:1)
(Donets Basin--Coal geology)

ALYMOV, D.F.; DYSSA, F.M.; LEYVIKOV, M.Kh.; POGODINA, V.I.; NESTERENKO, P.G.;
SHIROKOV, A.Z.

Conformity of lower Carboniferous coal beds in the western Donets
Basin. Izv. DGI 29:3-18 '57. (MIRA 11:5)
(Donets Basin--Coal geology)

AGULOV, Aleksey Pavlovich, kand.geol.-mineral.nauk, nauchnyy sotrudnik;
ALEKSEYEV, Aleksey Mikhaylovich, dotsent, nauchnyy sotrudnik;
BARYSH, Mariya Yakovlevna, inzh.-geolog, nauchnyy sotrudnik;
DOMORATSKIY, Nikolay Aleksandrovich, dotsent, nauchnyy sotrudnik;
LEVIN, Semen Timofeyevich, dotsent, nauchnyy sotrudnik; NESTERENKO,
Petr Grigor'yevich, prof., nauchnyy sotrudnik; SHIROKOV, Aleksandr
Zosimovich, prof., nauchnyy sotrudnik; SHPAKHLEK, Abram Grigor'yevich,
starshiy nauchnyy sotrudnik; OVCHAROVA, Z.G., red.izd-va; ROZENTSVEYG,
Ye.N., tekhn.red.

[Atlas of Donets Basin coals] Atlas uglei Dneprovskogo basseina.
Kiev, Izd-vo Akad.nauk USSR, 1960. 44 p.

(MIRA 13:12)

1. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut
im. Artema (for all, except Ovcharova, Rozentsveyg). 2. Chlen-
korrespondent AN USSR (for Shirokov).
(Donets Basin--Coal geology)

SHIROKOV, A.Z., [Shyrokov, O.Z.], ALYKOV, D.F.

Tectonics and volcanism of the western Donets Basin. Geol.
zhur. 23 no.5:3-14 '63. (MIRA 16:12)

1. Dnepropetrovskiy gornyy institut.

SHIROKOV, A.Z.; SAVCHUK, S.V.; STRUYEV, M.I.

Coals of the western Donets Basin. Izv. vys. ucheb. zav.;
geol. i razv. 7 no.2:73-82 F'64. (MIRA 17:2)

1. Dnepropetrovskiy gornyy institut.

BERDYUKOVA, M.D.; INDOVA, K.I.; ISPCHENKO, A.M.[deceased];
KOLOMEYTSEVA, A.K.; LIFSHITS, M.M.; PAZUKHINA, D.K.;
SHARAYEVA, L.N.; SHIROKOV, A.Z.; VAL'TS, I.E., red.;
STRUYEV, M.I., red.; NIKOLAYEVA, I.N., red.

[Atlas of the Lower Carboniferous coals of the Donets Basin]
Atlas uglei nizhnego karbona Donetskogo basseina. [By] M.D.
Berdjukova i dr. Moskva, Nauka, 1964. 101 p.
(MIRA 18:4)

SHIROKOV, A.Z.; SEDENKO, S.M.

Germanium in the main types of sedimentary rocks. Lit. 1 pol.
iskop. no.2:167-172 Mr-Ap '65. (MIRA 18:6)

1. Otdeleniye gornorudnykh problem AN UkrSSR, Dnepropetrovsk.

SHIROKOV, A.Z. [Shyrokov, O.Z.]; LAZEBNIK, P.V. [Lazebnyk, P.V.];
SEDENKO, S.M.

One aspect of the problem of the germanium potential of coal.
Geol. zhur. 24 no.5:100-102 '64. (MIRA 17:12)

1. Otdeleniye gornorudnykh problem Instituta elektrotekhniki
AN UkrSSR.

L 1301-65 EWT(d)/EWT(1)/EWT(m)/EWP(w)/T-2/EWP(1) - 13F(c) WH/EM/BC
 ACCESSION NR: AP5022453 UR/0209/65/000/009/0019/0023

AUTHORS: Grukhin, N. (Engineer, Captain); Karpenko, V. (Engineer, Major);
Shirokov, B. (Engineer, Lieutenant Colonel)

TITLE: In bumpy air conditions

SOURCE: Aviatsiya i kosmonavtika, no. 9, 1965, 19-23

TOPIC TAGS: aircraft stress, aircraft control, aircraft control system, atmospheric turbulence, automatic pilot, aircraft stability, gust load

ABSTRACT: The control problems involved in flying through bumpy air were studied to determine the best control system. Structural overloading (caused by the wind) and maneuvering stress components must be minimized, and angles of attack exceeding the critical one must be avoided. Manual control causes up to 50% more overloading situations than autopilot control, since the plane's moment of inertia prevents the pilot from rapidly changing the pitch angle. An autopilot can react to pitch angle, angular acceleration, and altitude or may be insensitive to altitude. Small altitude changes produce insignificant control signals, and large altitude changes result in control with increased maneuvering overloading. Thus, in all conditions (except for gale gusts which must be studied further) the

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L 1301-66

ACCESSION NR: AP5022453

autopilot without altitude sensitivity provides the best control in bumpy air. The autopilot does not eliminate overloading. Tests conducted on overloading stabilization systems indicated that these were ineffective and that improvements must be sought by developing a method for utilizing the changes in the lift force. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: AC

NO REF SOV: 000

OTHER: 000

Card 2/2